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By-Keill, James

[PROJECT ADMIRE (ASSISTANCE FOR DECISION MAKING THROUGH INFORMATION RETRIEVAL IN EDUCATION). PRINCIPAL'S MANUAL FOR PUPIL SCHEDULING BY COMPUTER.]

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A step-by-step process is described for registering students in junior and senior high schools by electronic computer and for providing them with conflict-free programs. The manual provides answers to questions concerning procedure, outlines features to improve administrative control, depicts various forms of data processing materials used, and enumerates various types of results. Directions are given for data preparation, with examples of forms used for course coding, student identification numbers, course requests, registration summation and conflict analysis, master schedule description, and student program adjustment. Sample lists of both junior and senior high school course offerings are appended. (JK)

ED022243

admire*

*Assistance for Decision Making through Information Retrieval in Education

Project - 4
Student Scheduling Application - 1
Principal's Manual

Title III - E. S. E. A.
Lincoln Public Schools
Lincoln, Nebr. 68501

EA 001 591

A D M I R E

Project ADMIRE received first year approval from the USOE on June 15, 1967. It is the goal of this project to use a computer system as a tool to assist decision making through the collection, compilation, organization and storage of data to be retrieved and reported in appropriate format. Assistance will be given to teachers, administrators and board of education members by the systematic analysis and reporting of data related to students, employees, special services and financial data to enable them to better evaluate all aspects of the instructional program.

Through this project the Lincoln Public Schools will provide electronic data processing service, as well as instructional services, to all schools in the cooperating five county area - - Lancaster, Fillmore, Saline, Seward and York - - known as Educational Service Unit #6.

This five county area will serve as a pilot for the collection of data for the State of Nebraska Department of Education and cooperate closely with the Midwestern States Educational Information Project.

This project is designed so that at the end of the three year period, a per pupil cost factor can be determined, making it possible to continue all services to the area with total support from local sources.

The work presented or reported herein was performed pursuant to a grant from the United States Office of Education, Department of Health, Education and Welfare.

Lincoln Public Schools
P. O. Box #200
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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PROJECT ADMIRE PRINCIPAL'S MANUAL

FOR

PUPIL SCHEDULING BY COMPUTER

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PROJECT INTERN

MR. WILLIAM TODD

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FOREWORD

This publication represents an attempt to reduce to writing and to flow-charts the procedures and practices related to the registration and scheduling of junior and senior high school students by electronic computer. Although manuals today are generally administrative devices for the orderly categorizing of recorded facts, this manual is an orderly statement of actions, especially prepared as a reference guide to assist principals, secretaries, clerks, counselors, and data processing coordinators specifically charged with the responsibility of student scheduling.

This manual does not set aside the necessity for careful planning for automation. Most certainly it does not disregard the human factors which are so necessary to guide information through the various processing steps. Rather, it emphasizes the paramount place played by people who are working with a mechanical process. It carries with it the implication that the value to the school organization of any set of results will be in direct proportion to the adherence to the prescribed process and to the thoroughness with which material is prepared for each process.

Specifically, the purpose of this brochure will be to describe the step-by-step process to be followed in registering and scheduling students in junior and senior high schools, to provide an authoratative reference in answer to questions pertaining to procedure, to improve administrative control, to depict various forms of data processing materials used in obtaining and recording source data and to enumerate the various types of results that can be obtained.

For purposes of reference an inventory of available equipment, a suggested chronology, a glossary of commonly used terms, and examples of materials used are also provided.

INVENTORY OF AVAILABLE EQUIPMENT

THE LINCOLN PUBLIC SCHOOLS 1440 IBM COMPUTER SYSTEM CONSISTS OF:

1	1447 Console
2	1311 Disk Drives
1	1403 Printer
1	1442 Reader and Punch
1	1441 Central Processing Unit (16-K Memory Unit)
1	1446 Printer Control Unit

OTHER IBM AUXILIARY EQUIPMENT

1	1230 Optical Mark Scoring Reader
2	029 Key Punch
1	534 Key Punch
1	059 Verifier
1	083 Sorter

OTHER AUXILIARY EQUIPMENT

1	Burster (Moore)
1	Decollator (Tab Products)

SUGGESTED CHRONOLOGY

SEMESTER 1

February 1 - March 1	Administrative Planning
	Course Coding
	Student Request Forms
March 1 - March 21	Registration of Pupils
March 21 - April 7	Course Tally and Potential Conflict Matrix
April 7 - May 7	Master Schedule; First Scheduling Pass;
	Updated Master Schedule
May 7 - August 7	Interim Adjustment Period
	Schedule Alteration
	Student Program Adjustment
August 7 - August 21	Final Run for Semester 1 Programs

SEMESTER 2

Sept. 30 - Nov. 1	Student Requests, Updated Enrollment
Nov. 1 - Nov. 16	Review of Course Tally and Conflict Matrix
Nov. 16 - Dec. 1	Master Schedule; First Scheduling Pass;
	Updated Master Schedule
Dec. 1 - Dec. 20	Interim Adjustment Period
	Schedule Alteration
	Student Program Adjustment
Dec. 20 - Jan. 3	Final Run for Semester 2 Programs

GLOSSARY OF COMMONLY USED TERMS

Class Section A section is a particular class meeting at a particular time and place. Sections carry with them a three digit course code number.

Course A course is a group of one or more sections that are identical in material that is taught in them.

Course Code Number A three-digit number identifying each course offered by the school. (Different levels of the course are treated as separate courses with discrete numbers.)

Pupil Request An indication by a pupil that he would like to be placed in a group of approved subjects.

Invalid Course Request A situation arising from an incorrect course code listing by the principal, a keypunch error or an incorrect selection by the pupil.

Tally Request A request from the principal to the Data Processing Center to provide a count of individuals by sex by grade registered into each of the complete list of coded courses submitted by the principal.

Potential Conflict Matrix A grid of one-section and two-section courses on which pupil registration is dispersed to determine which combination of courses will cause the greatest number of pupils to fail to register.

Period A period is a scheduled time increment in the school day of any given duration.

Master Schedule Principal's comprehensive plan of time, place, and instruction for each section of each course; a list of courses and their respective sections, including times, places of meeting and seat capacity.

Scheduling Pass An attempt by the computer to load the pupils into course sections described by the principal. Also described as Scheduling Run.

File Maintenance A force routine which enables the administrator to update the computer records thereby completing conflict-free schedules for all students.

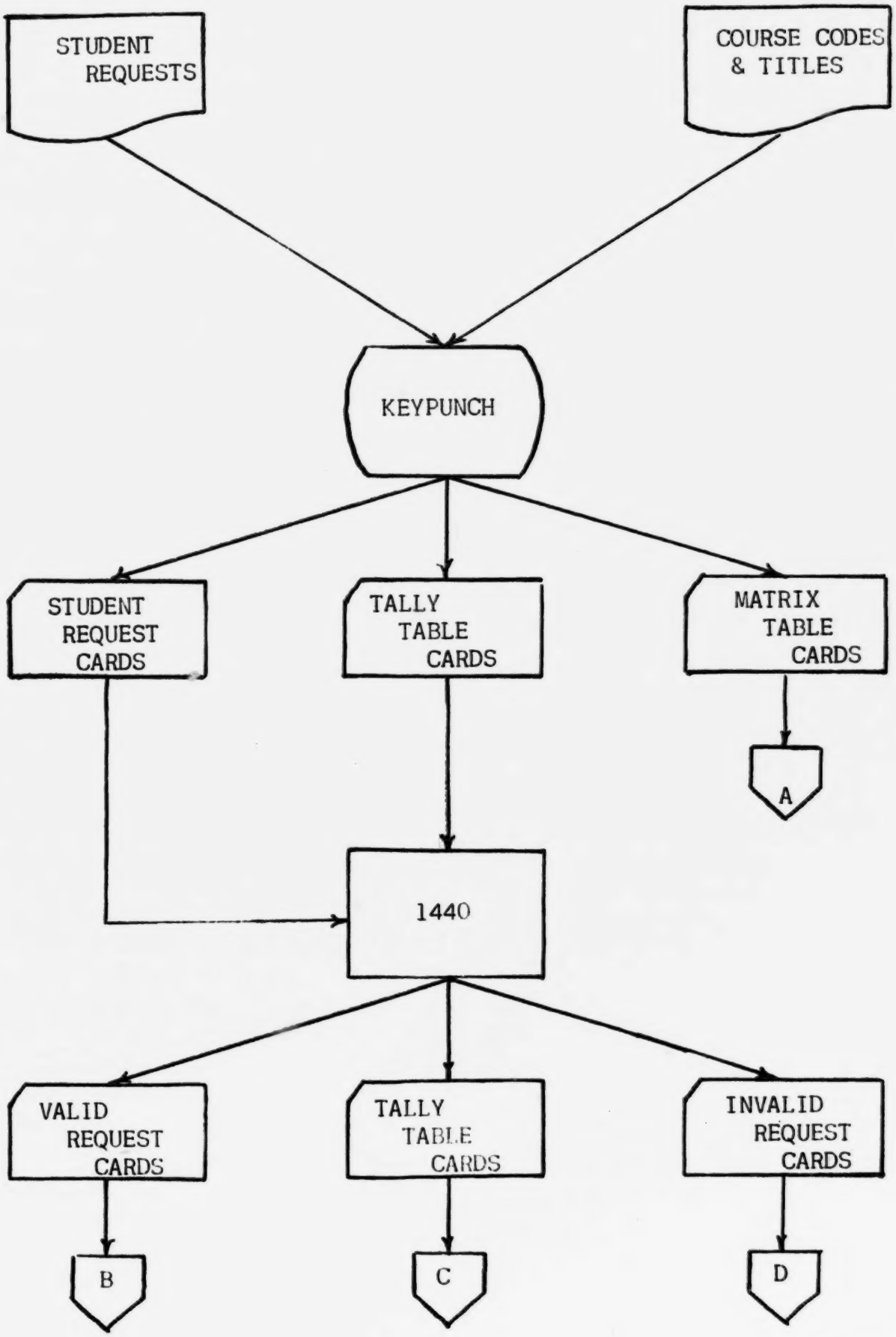
Irresolvable Conflict A scheduling impasse which occurs when more than one course offering requested by a student meets in (and only in) the same time segment.

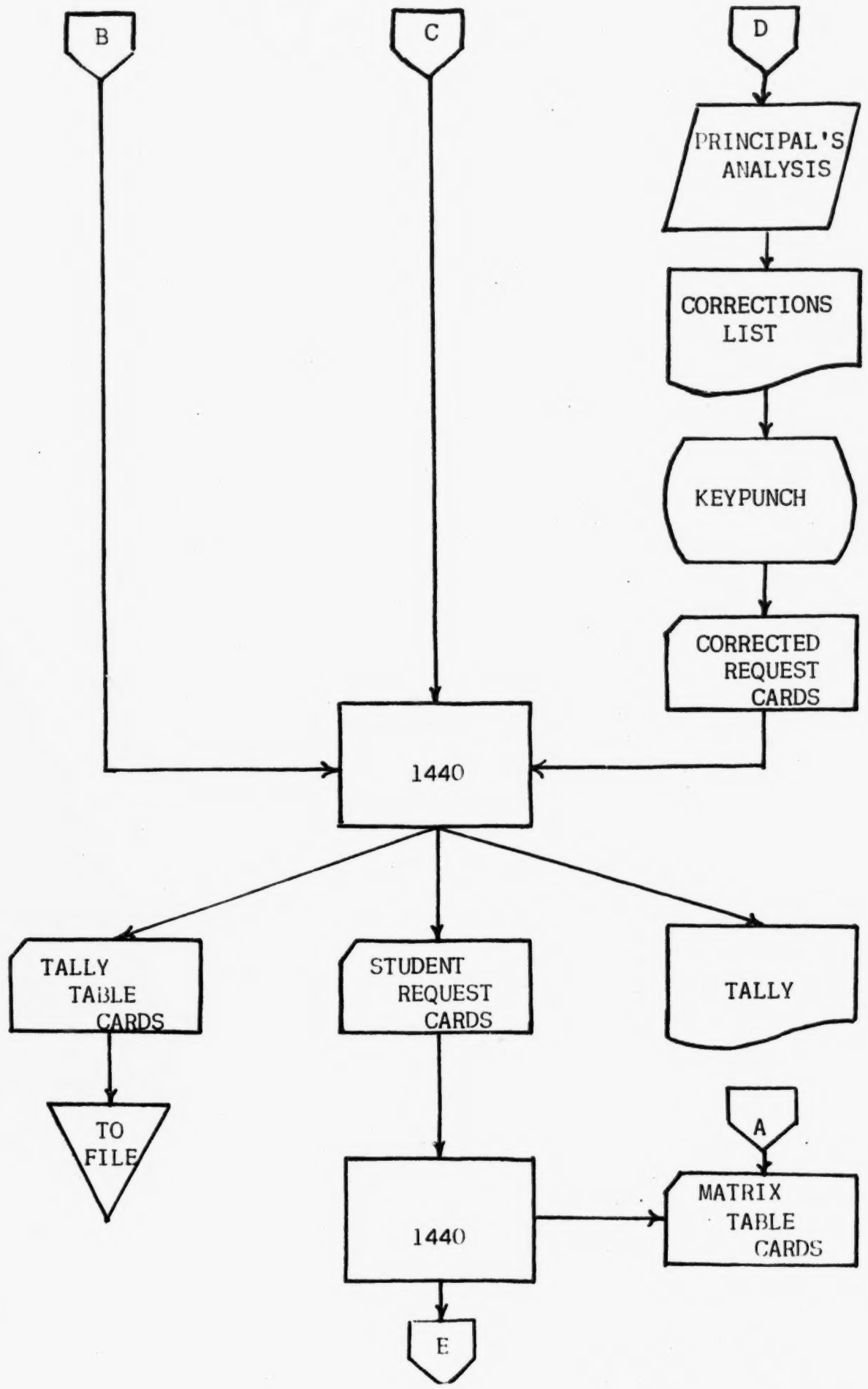
STATEMENT OF OBJECTIVES

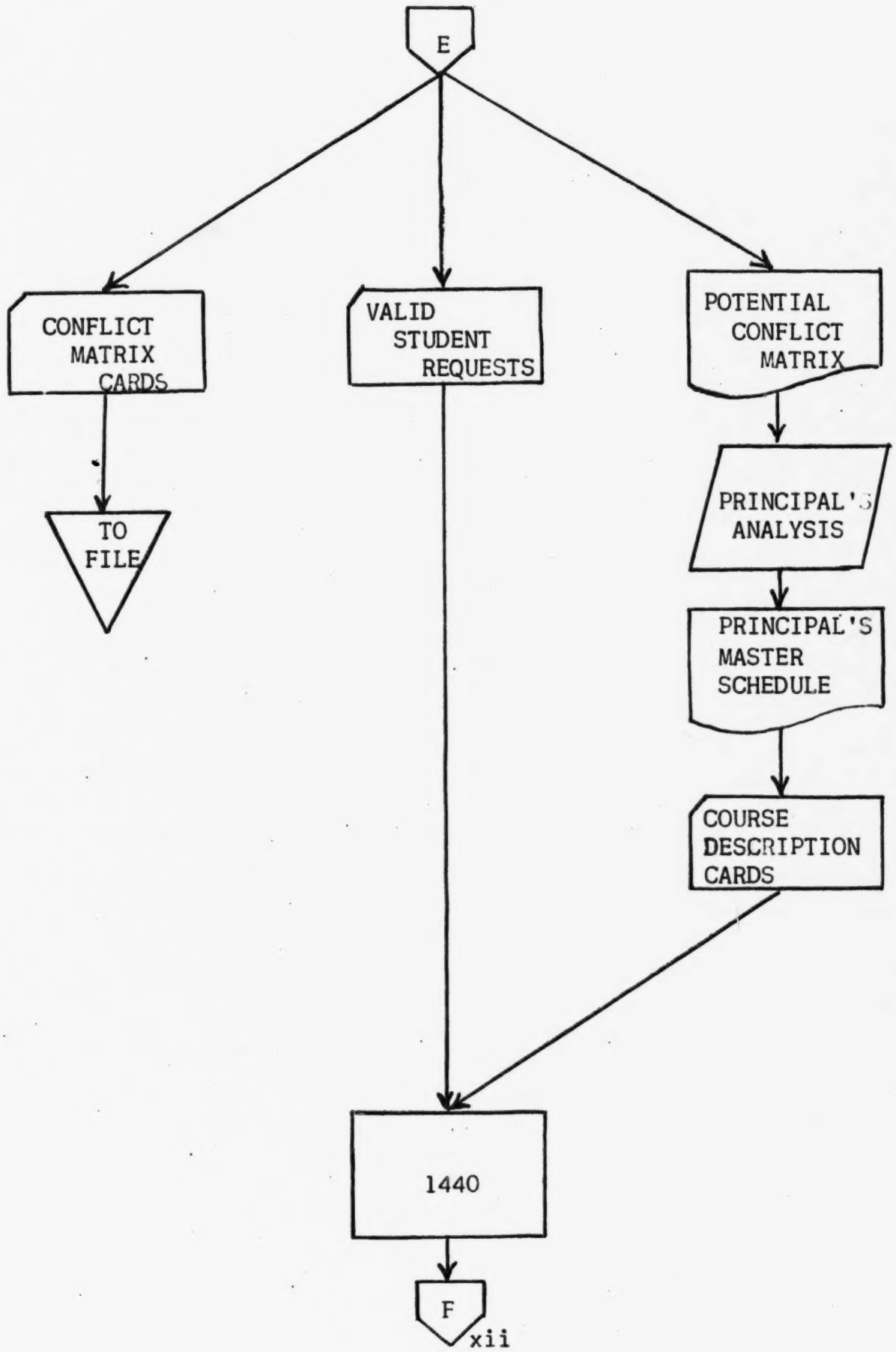
Because new and better methods evolve with new understandings, the following statement of goals or objectives to be accomplished by this manual is expected to change frequently. However, it is hoped that current processed information retrieved from computer data will result in the following outcomes:

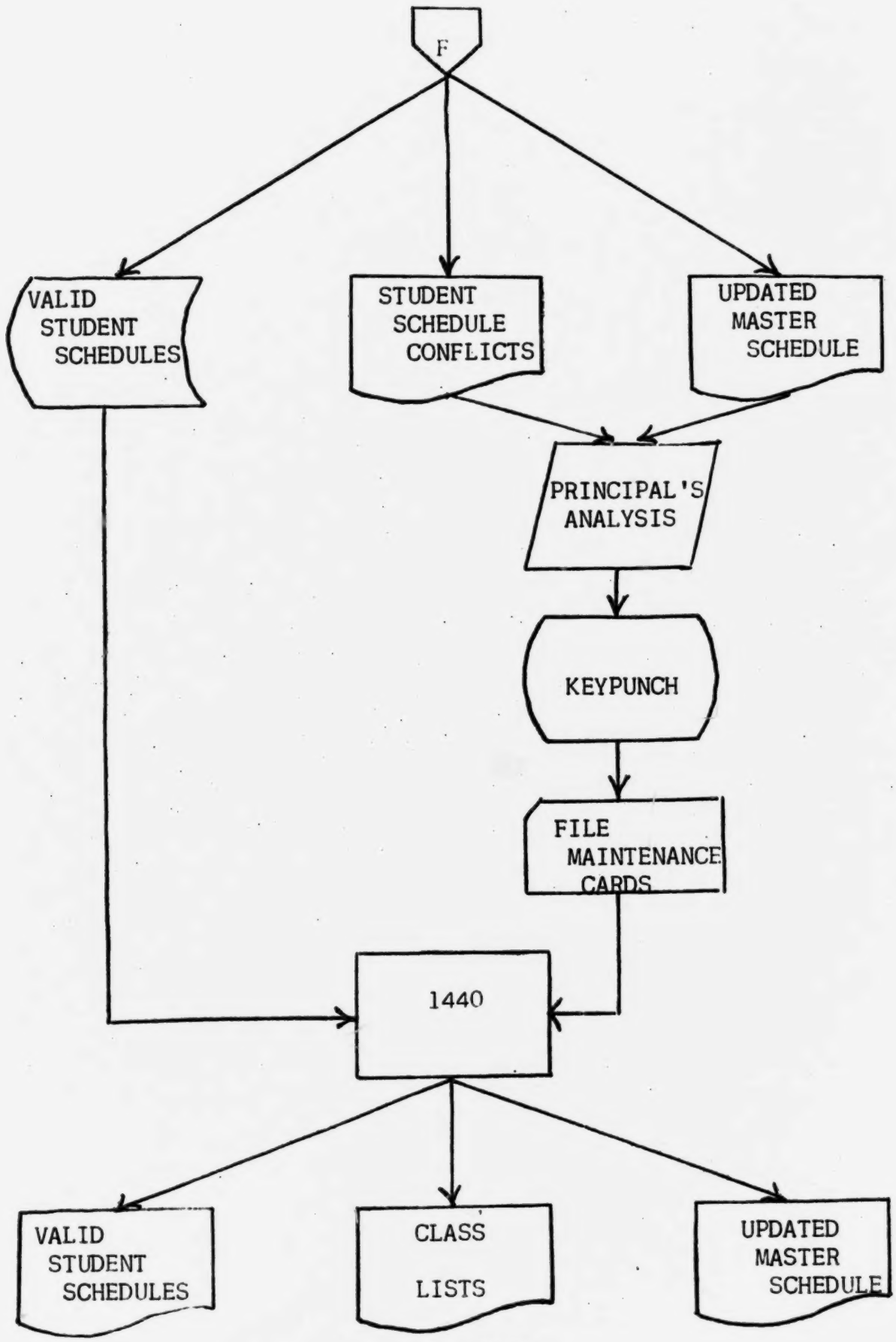
1. Time savings for members of the school staff through the reduction of routine clerical duties.
2. More emphasis on Spring registration which should result in more individual student counseling.
3. More parent participation in course selection of individual student programs as a result of the counseling.
4. Closer scrutiny and refinement of curriculum offerings.
5. Improved personnel relationship involving more definite selection, optimum assignment to major preparation field and balanced teaching loads.
6. Better room utilization and scheduling of existing facilities.

GENERAL FLOW CHART SHOWING REGISTRATION
AND SCHEDULING PROCEDURES




B
C
D
PRINCIPAL'S ANALYSIS
CORRECTIONS LIST
KEYPUNCH
CORRECTED REQUEST CARDS
1440
TALLY TABLE CARDS
STUDENT REQUEST CARDS
TALLY
TO FILE
A
MATRIX TABLE CARDS
1440
E


E
CONFLICT MATRIX CARDS
TO FILE
VALID STUDENT REQUESTS
POTENTIAL CONFLICT MATRIX
PRINCIPAL'S ANALYSIS
PRINCIPAL'S MASTER SCHEDULE
COURSE DESCRIPTION CARDS
1440
F


F
VALID STUDENT SCHEDULES
STUDENT SCHEDULE CONFLICTS
UPDATED MASTER SCHEDULE
PRINCIPAL'S ANALYSIS
KEYPUNCH
FILE MAINTENANCE CARDS
1440
VALID STUDENT SCHEDULES
CLASS LISTS
UPDATED MASTER SCHEDULE

INTRODUCTION

The following service offered through Project ADMIRE is detailed in a series of steps designed to give freedom and flexibility to participating school administrators in preparing conflict-free student programs. The significant advantage of this method of student scheduling lies in the "random access capabilities" of the computer. Through this capability the inherent disadvantage of "arbitrary assignment" (to section) is kept at a minimum. This is possible because of the machine's ability to schedule first those students who requested a number of "single-section" courses and at the same time maintain a balanced population in "multiple-section" subjects. Through the additional service of a conflict matrix, potential impasses encountered in a fixed master schedule can be anticipated and avoided. Even after a school has been scheduled it is possible through the file maintenance run to change the schedule of students. The result is the possibility of all programs being conflict-free.

The versatility of the TARS (Tally, Analysis, Registration, Scheduling) program is enhanced by the availability of twelve useable time increments (periods) per day. The administrator may use these twelve time increments to build a comprehensive program, including in it lunch periods and study hall assignments as well as student course requests. Complexity of program, however, is not a necessity for machine programming, since any school program which can be hand scheduled can also be scheduled by the TARS facility.

ADMINISTRATIVE PLANNING

DATA PREPARATION

All data (information) prepared for the Data Processing Center should be carefully entered on proper forms and according to instructions in this procedure manual. In days when instant duplication of printed materials has become a reality, the suggestion is made that the principal keep duplicate copies of key documents related to the registration and scheduling processes.

Course Coding. Any program of student scheduling starts with the enumeration of the course offerings in the curriculum. Since the course offering must be interpreted to the computer, each unique organization of subject matter, or student activity, must be given a three digit number. This is called a course code number.

For purposes of uniformity it is customary to divide course offerings into broad areas and to assign blocks of numbers to the broad groups. The Lincoln Public Schools have generally divided course offerings thus:

001 - 099 Optional classes, or numbers reserved for principals.

100 - 199 Special numbers (junior high schools), Business Education (senior high schools).

200 - 299 Language Arts, Speech, Drama, Journalism.

300 - 399 Fine Arts, Vocal and Instrumental Music, Art.

400 - 499 Practical Arts, Home Economics.

500 - 599 Foreign Languages.

600 - 699 Mathematics.

700 - 799 Science.

800 - 899 Social Studies.

900 - 999 Physical Education, Health, Miscellaneous.

For purposes of convenience, odd numbers are generally assigned to first semester courses, even numbers to second semester courses. Arrangement for numbers which designate courses continuing through both semesters is also included. For example:

First Sem.	Second Sem.	Both	Title of Course
201	202	203	7th English--- 7th Grade English.

It should be duly noted that any one semester course offered both semesters should carry a different number each semester. For example:

First Sem.	Second Sem.	Title of Course
277	278	Journalism
421	422	M. Drafting

For purposes of reference, lists of junior high school and senior high school offerings, together with a suggested numbering system, appear at the end of the manual as Appendix A and Appendix B. Suggested abbrevia ions of course titles which may be used for purposes of recording grades on the permanent record and which meet the machine limitation of thirteen (13) spaces have been inserted in the lists for convenience.

Student Identification Number. The student identification number is highly important in sorting procedures for many data processing applications. Procedures for assigning pupil identification numbers may be obtained from the Coordinator of Data Processing.

In the Lincoln Public Schools, pupils in grades two through twelve have already been assigned six digit identification numbers. The first two digits are the year in which the pupil is expected to graduate. For example: a pupil enrolled in grade eleven in 1967-68 would have a number beginning 69----, a pupil enrolled in grade nine in 1967-68 would have a number beginning 71----, etc. Care should be taken when instituting procedures for assigning pupil identification numbers to pupils who were "non-enrolled" in the Lincoln system that the legal name (only) is used.

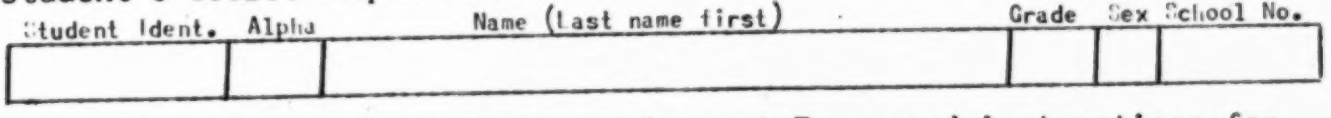
In Area 6 schools, other than the Lincoln Public Schools, six digit identification numbers will be assigned. Such numbers may be machine assigned to permit school personnel to enter new students into the system in approximately alphabetical sequence. For example: 000500--Abbott, 000600--Adams, 000700--Allen, etc.

If an Area 6 school has already assigned pupil identification numbers, the numbers will be hand punched to accomodate the system. However, any system so instituted should probably be amenable to the insertion of new students into an alphabetical sequence.

Course Request Form. A student Course Request Form will be completed for each student in the school. The school will prepare a

listing of the complete offerings and course codes for that particular school. While each school is allowed the latitude of selecting those course codes and titles necessary for its own situation, every effort should be made to be consistent with the revised list of course offerings which meet the thirteen (13) space limit. Reference is again made to Appendix A and Appendix B for purposes of determining course codes and course titles.

For purposes of uniformity and convenience to keypunch operators, the following heading is required at the top of each student's Course Request Form:



Examples of typical Course Request Forms and instructions for same appear as Figures 1 and 2 (junior high school) and Figures 3 and 4 (senior high school). Customarily a request form is produced for each grade although the entire listing of course offerings by a school for all grades may appear on one sheet. Course Request Forms are frequently color-coded by grades for convenience in sorting.

Any other information as each school may require and such instruction as is pertinent to the individual situation is left to the discretion of the individual school.

REGISTRATION SUMMATION AND CONFLICT ANALYSIS

When each student has been properly registered the completed Course Request Forms are forwarded to the Data Processing Center to be summarized.

FIGURE 1

SHOWING TYPICAL COURSE OFFERINGS AND REGISTRATION INSTRUCTION IN A LINCOLN JUNIOR HIGH SCHOOL GRADES 7, 8, 9

MILLARD LEFLER JUNIOR HIGH SCHOOL COURSE OFFERINGS
1968-1969

Each pupil must register for the required subjects and the electives necessary to complete a six-period day. A six-period day begins at 8:45 a.m. and closes at 3:15 p.m. A pupil may elect a seventh period upon the approval of the counselor. The seven period day begins at 8:00 a.m. and closes at 3:15 p.m.

Grade 7

Required Subjects (1-5)

1. English
2. American Studies
3. Arithmetic
4. Science and Home Economics or Industrial Arts (Alternate semesters)
5. Physical Education and Orientation* (2 sem.) (Alternate daily)
6. Elective Subject (Select 1 each semester)
   - Art 1-2
   - Boys Chorus
   - Girls Chorus
   - Instrumental Music
7. Additional Period Subject
   Select from No. 6

* May elect Study Hall (2 semesters)

Grade 8

Required Subjects (1-5)

1. English
2. American Studies
3. Arithmetic or Algebra
4. Health and Ph. Ed.
5. Home Economics or Industrial Arts and Elective Subject for alternate semester
6. Elective Subject (Select 1 each semester)
   - Art 1-2
   - Boys Chorus
   - Crafts 1
   - Drafting 1
   - Girls Chorus
   - Instrumental Music
   - Metal Work 1
   - Science (Earth)
   - Small Engines
   - Space Science
   - Speech 1-2
   - Typing 1-2
7. Additional Period Subject
   Select from No. 6

Grade 9

Required Subjects (1-4)

1. English
2. World Studies
3. Algebra or Gen. Math
4. Science and Elective (1 semester Science required)
5. Elective Subject
6. Elective Subject (Select 2)
   - Art 1-2
   - Boys Chorus
   - Crafts 1
   - Drafting 1
   - Electronics 1
   - French 1-2 or 5a-6a
   - German 1-2
   - Girls Chorus
   - Home Economics 1-2
   - Instrumental Music
   - Journalism 1
   - Metal Work 1
   - Physical Education
   - Science:
     - Earth-1 semester
     - I.P.S.-2 semesters
   - Small Engines
   - Space Science
   - Spanish 1-2
   - Speech 1-2
   - Student Assistant (Select one)
     - Audio-visual Asst.
     - Library Asst.
     - Nurse Asst.
     - Office Asst.
     - Phys. Ed. Asst.
     - Teacher Asst.
   - Typing 1-2
   - Woodwork 1
7. Additional Period Subj.
   Select from No. 6

FIGURE 2

SHOWING TYPICAL STUDENT REQUEST FORM FOR
LINCOLN JUNIOR HIGH SCHOOL

MILLARD LEFLER SCHOOL
1968-1969

Stud. No.	H.R.	Last Name	First	09	B G	15

1st Sem.	2nd Sem.	Year	Hours	Subject
001	002		____	No Optional Period
111	112		____	Office Assistant
113	114		____	Audio-Assistant
115	116		____	Teacher Assistant
		251	____	English
285	286		____	Speech 1
	288		____	Speech 2
289	290		____	Journalism
		313	____	Band
		314	____	Adv. Band
		317	____	Orchestra
359	360		____	Boys Chorus
371	372		____	Girls Chorus
405			____	Woodwork 1
411			____	Metals 1
417	418		____	Drafting 1
	426		____	Electronics 1
429	430		____	Crafts 1
434	435		____	Small Engines
443	444		____	Home Economics
505	502		____	Art 1
507	508		____	Art 2
		545	____	French 1-2
		549	____	French 5a-6a
		553	____	Spanish
		557	____	German
		639	____	General Math
		643	____	Algebra
		647	____	Geometry
			____	Space Science
715	716		____	I.P.S. Science
		726	____	Earth Science
749	750		____	World Studies
		835	____	Phys. Ed. - Boys) 1 sem.
943	944		____	Phys. Ed. - Girls) only
955	956		____	Typing 1
961	962		____	Typing 2
	964			
	Must Total 70		____	

FIGURE 3

TYPICAL SENIOR HIGH SCHOOL COURSE OFFERINGS IN LINCOLN, NEBRASKA

LINCOLN NORTHEAST HIGH SCHOOL

COURSE NUMBERS-TITLES
1968-1969

Note: Courses followed by (S) are one semester courses.

Courses giving more than or less than 5 hours credit have the proper credit designation in parenthesis.

*Class will meet at 8:00 o'clock.

NO 8 a.m. CLASS

001 No 8 a.m. Class
002 No 8 a.m. Class
003 No 8 a.m. Class

SPEC.EMPLOYMENT

031 Spec.Empl.--a.m. (Per.2-3,1st Sem)
032 Spec.Empl.--a.m. (Per.2-3,2nd Sem)
033 Spec.Empl.--p.m. (Per.6-7,1st Sem)
034 Spec.Empl.--p.m. (Per.6-7,2nd Sem)

1st SEM.SPECIALS

051 *Special 1st Per.
052 Special 2nd Per.
053 Special 3rd Per.
054 Special 4th Per.
055 Special 5th Per.
056 Special 6th Per.
057 Special 7th Per.
059 Special Any Per.

2nd SEM.SPECIALS

061 *Special 1st Per.
062 Special 2nd Per.
063 Special 3rd Per.
064 Special 4th Per.
065 Special 5th Per.
066 Special 6th Per.
067 Special 7th Per.
069 Special Any Per.

EARLY LUNCH

070 'N' Geom. 1-2
071 'N' Eng. 3-4
072 'N' A.Hist.1-2
073 'N' Alg. 3-4

BUSINESS EDUC.; DISTRIB. EDUC.

105 Bookkeeping 1-2
111 Typing 1-2
115 Typing 3-4
131 Shorthand 1-2
133 Shorthand 3-4
135 Steno.Tr. 1-2
137 Cler. Tr. 1-2
139 *Notehand (S)
171 Bus. Prin. 1
172 Bus. Prin. 2
173 Mkt-Mchdsng.1-2

ENGLISH

201 English 3-4
211 Read.Impr.1-2
221 English 3E-4E
241 Sr.Comp. 1-2
243 Sr.Comp.1A-2A
247 English 5E-6E
263 Eng.Lit.(S)
264 Eng.Lit.(S)
265 Wld.Lit.(S)
266 Wld.Lit.(S)
267 Gen.Lit. 1
268 Gen.Lit. 2
271 Speech 1-2
273 Drama 1-2
275 Debate 1-2
277 Journalism (S)
278 Journalism (S)
279 Newspaper 1-2
281 Yearbook 1-2

FINE ARTS

301 Art Appr. (S)
302 Art Appr. (S)
303 Allied Arts(S)
304 Allied Arts(S)
305 Gen. Art (S)
306 Gen. Art (S)
307 Elem.Des. 1-2
309 Dr-Paint. 1-2
310 Dr-Paint. 3-4
313 Comm.Art (S)
316 Des-Craft (S)
331 Brass Ens.(0)
333 Wood. Ens.(0)
335 Prep Band 1-2
337 Adv. Band 1-2
339 Prep Orch.1-2
341 Adv. Orch.1-2
343 *D.Band 1-2 (2)
353 10 B. Chorus
354 10 B. Chorus
355 10 G. Chorus
356 10 G. Chorus
363 11 B.Glee (3)
364 11 B.Glee (3)
365 11 G.Glee (3)
366 11 G.Glee (3)
367 11 Mix.Chor.(2)
368 11 Mix.Chor.(2)
369 Choir
371 12 Mix.Chor.(3)
372 12 Mix.Chor.(3)
373 *G.Tr.Trio 1-2
375 *B.Octet 1-2
377 Music Theory(2)
378 Music Theory(2)

HOME ECONOMICS

401 Clothing 1-2
405 Foods 1-2
409 H.Plan-Des.(S)
410 H.Plan-Des.(S)
411 Family Liv.1-2

AGRICULTURE; IND. EDUC.

415 Ag. 1-2
417 Ag. 3-4
419 Ag. 5-6
421 M.Draft.(S)
422 M.Draft.(S)
423 M.Draft. 1-2
425 A.Draw. 1-2
427 A.Draw. 3-4
431 Elect. 1 (S)
432 Elect. 1 (S)
433 Elect. 3-4
435 Elect. 5-6
441 Wood. 1 (S)
442 Wood. 1 (S)
443 Wood.3-4
445 Wood 5-6(10)
471 E.Mech.1 (S)
472 E.Mech.1 (S)
473 E.Mech.3-4
475 E.Mech.5-6(10)
481 Metal 1 (S)
482 Metal 1 (S)
483 Metal 3-4

LANGUAGES

501 French 1-2
503 French 3-4
505 French 5-6
507 French 7-8
521 German 1-2
523 German 3-4
525 German 5-6
543 Latin 3-4
561 Spanish 1-2
563 Spanish 3-4
565 Spanish 5-6
567 Spanish 7-8

MATHEMATICS

601 Math 1-2
605 Algebra 1-2
609 Geom. 1-2
613 Algebra 3-4
615 Algebra 3A-4A
619 Trig (S)
621 TrigA-An.GeomA
622 Anal.Geom. (S)
691 *Prog.Alg. 1
692 *Prog.Alg. 2
693 *Prog.Geom. 1
694 *Prog.Geom. 2
695 *Prog.Alg. 3
696 *Prog.Alg. 4
697 *Prog.Trig.
698 *Prog.An.Geom.

SCIENCE

701 Science 1-2
703 Biology 1-2
707 Physiol. 1-2
721 Physics 1-2
731 Chemistry 1-2

SOCIAL STUDIES

801 Wld.Stud. 3
802 Wld.Stud. 4
807 Soc.Stud.1E-2E
821 A.Hist. 1-2
827 Soc.Stud.3E-4E
829 Mod.Problems 1
830 Mod.Problems 2
831 20th C.Am.(S)
832 20th C.Am.(S)
835 Soc.Stud.5E-6E
843 Economics (S)
844 Economics (S)
845 U.S.Gov't.(S)
846 U.S.Gov't.(S)
847 Philosophy(S)
848 Philosophy(S)

GUIDANCE

861 10 Guid. 1-2
871 11 Guid. 1-2
881 12 Guid. 1-2

P.E.--HEALTH

901 B. P.E. 1 (3)
902 B. P.E. 2 (3)
903 B. P.E. 3 (2)
904 B. P.E. 4 (2)
905 B. P.E. 5
906 B. P.E. 6
921 B.Sw(Beg) (2)
922 B.Sw(Beg) (2)
923 B.Sw(Adv) (2)
924 B.Sw(Adv) (2)
931 G. P.E. 1 (3)
932 G. P.E. 2 (3)
933 G. P.E. 3 (2)
934 G. P.E. 4 (2)
935 G. P.E. 5
936 G. P.E. 6
951 G.Sw(Beg) (3)
952 G.Sw(Beg) (3)
953 G.Sw(Adv) (2)
954 G.Sw(Adv) (2)
963 Health Ed.(S)
964 Health Ed.(S)

MISCELLANEOUS

967 *Driver Ed.(S)
968 *Driver Ed.(S)
975 Stagecraft 1-2
997 Stu.Coun. (2)
998 Stu.Coun. (2)
999 No Guid.1-2(0)

FIGURE 4

SHOWING TYPICAL SENIOR HIGH SCHOOL REQUEST FORM INCLUDING WORK SHEET FOR STUDENT SELECTION

REQUEST FOR COURSES:--Lincoln Northeast High School-- 1968-1969

Student Coue	Alpha	Name (Last name first)	Grade	Sex
			1	0 3

Schedule:

Per.	First Semester Course Title No.	Per.	Second Semester Course Title No.
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	

First Semester Course Numbers

001	057	135	263	305	343	401	431	483	563	691	707	843	923
002	059	137	265	307	353	405	433	501	565	692	721	845	931
003	070	139	267	309	355	409	435	503	567	693	731	847	933
031	071	171	271	310	363	411	441	505	601	694	801	861	935
033	072	173	273	313	365	415	443	507	605	695	807	871	951
051	073	201	275	331	367	417	445	521	609	696	821	881	953
052	105	211	277	333	369	419	471	523	613	697	827	901	963
053	111	221	279	335	371	421	473	525	615	698	829	903	967
054	115	241	281	337	373	423	475	543	619	701	831	905	975
055	131	243	301	339	375	425	481	561	621	703	835	921	997
056	133	247	303	341	377	427							999

Second Semester Course Numbers

001	067	135	266	307	354	405	432	483	563	691	707	844	924
002	069	137	268	309	356	410	433	501	565	692	721	846	932
003	070	172	271	310	364	411	435	503	567	693	731	848	934
032	071	173	273	316	366	415	442	505	601	694	802	861	936
034	072	201	275	331	368	417	443	507	605	695	807	871	952
061	073	211	278	333	369	419	445	521	609	696	821	881	954
062	105	221	279	335	372	422	472	523	613	697	827	902	964
063	111	241	281	337	373	423	473	525	615	698	830	904	968
064	115	243	302	339	375	425	475	543	621	701	832	906	975
065	131	247	304	341	378	427	482	561	622	703	835	922	998
066	133	264	306	343	401								999

Parent's name _____ Address _____ Phone _____

KEYPUNCH OPERATION.

Step 1. The Data Processing Center, using the Student Request Form, will punch each student's registration into machine-readable cards. Figure 5 is an example of a student's request in data processing form.

Step 2. Using Form EDP-6801, (see Figure 6) each principal will provide the Data Processing Center with a coded list of all courses at the school. On this form he will also designate course codes in which "one-section" and "two-section" courses are anticipated. The number of "one-section" and "two-section" courses designated should be limited to fewer than one hundred courses since these numbers will be used in forming the conflict matrix. The information on Form EDP-6801 will be punched into two "decks" called the Tally Table Cards and the Matrix Table Cards.

COURSE REQUEST TALLY AND CONFLICT MATRIX.

The comparison of student requests against the Tally Table Cards provides a validation procedure which will result in the rejection of those improperly coded subjects and/or invalid student requests.

After all invalid course codes and student requests have been resolved and deleted the Data Processing Center will provide the school with a count (tally) of the student requests for each course, by sex and by grade. Figure 7 shows a typical report back to the school.

From the course tally a determination may be made by the principal as to the number of sections required for each subject. This information will also give the principal direction as to proposed

FIGURE 5

SHOWING A TYPICAL EXAMPLE OF A STUDENT'S REGISTRATION
PUNCHED INTO A MACHINE-READABLE COMPUTER CARD

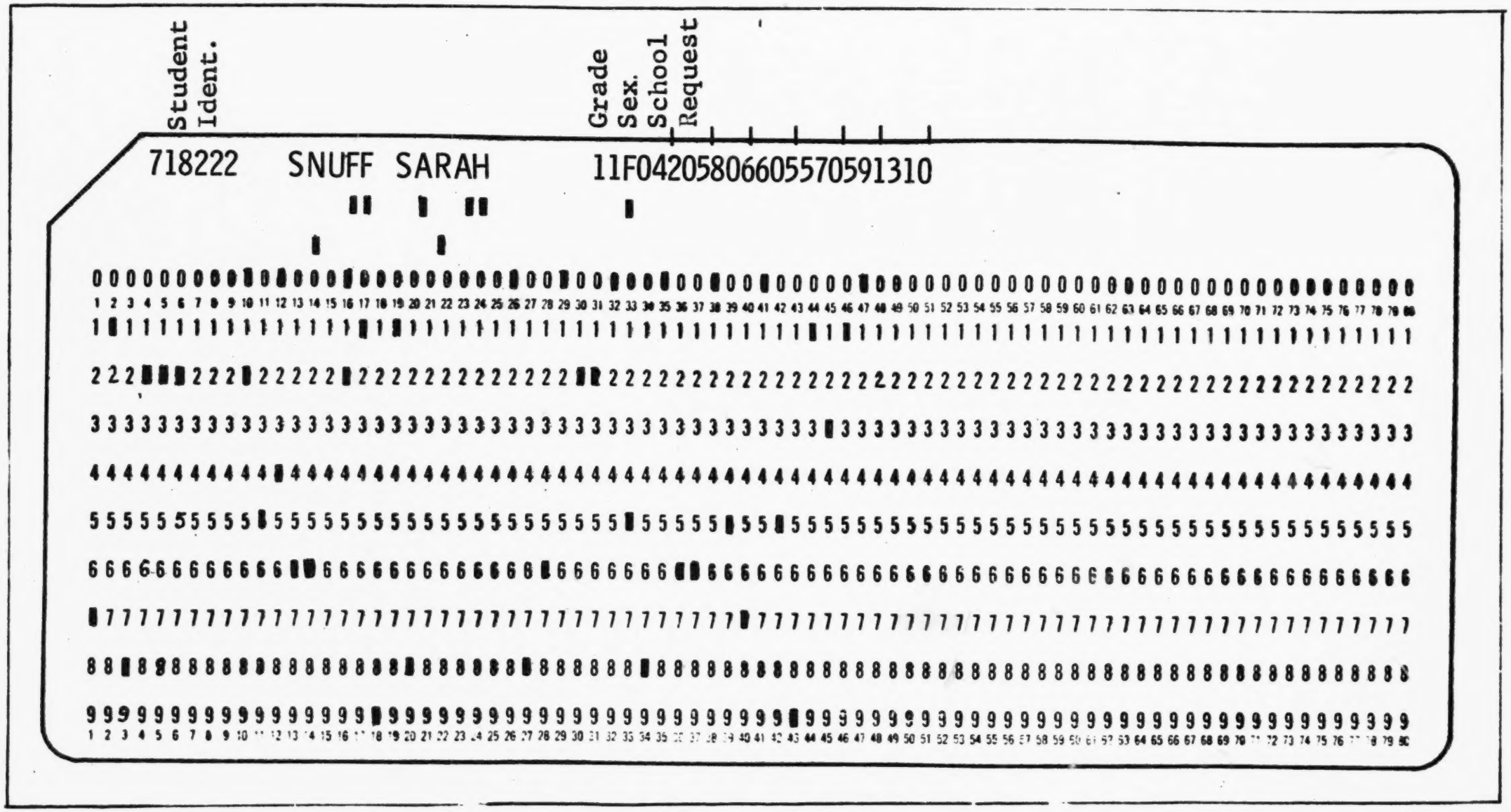


FIGURE 6

SHOWING FORM EDP-6801TO BE USED FOR COMPLETE LISTING
OF CODED COURSE OFFERINGS AND FOR REQUESTING
A COURSE TALLY AND A CONFLICT MATRIX

FORM EDP-6801

LIST OF CODED COURSES:
TALLY AND MATRIX REQUEST:

SCHOOL NAME MILLARD LEFLER TOWN LINCOLN

District No. 1 Building No. 15

MATRIX REQUEST	COURSE NO.	COURSE TITLE
Check, if course desired in conflict matrix	List in ascending order	
	002	NO OPTIONAL
✓	112	OFFICE ASST
✓	114	AV ASST
✓	116	TEACHER ASST
	203	ENGLISH 7
✓	207	ENGLISH 7 H
	211	ENGLISH 7 L
	227	ENGLISH 8
	231	ENGLISH 8 H
	235	ENGLISH 8 L
	251	ENGLISH 9
✓	286	SPEECH 1
✓	288	SPEECH 2
✓	290	JOURNALISM
✓	311	PREP BAND
✓	313	BAND
✓	314	ADV BAND
✓	315	PREP ORCHESTRA
✓	317	ADV ORCHESTRA

staff needs. The tally may also suggest opportunities to alter student requests so that enrollment for one-semester classes will balance between the semesters.

The Data Processing Center will prepare a conflict matrix using the raw data provided by student registration and sections selected by the principal. The conflict matrix will show the potential single and double section classes which will cause the most students to fail to schedule. The conflict matrix allows the principal to construct the master schedule so that these single and double section courses with the greatest number of potential conflicts are not scheduled the same period.

Figure 8 shows a typical dispersal of course tallies on a conflict grid. It should be noted that these represent only potential conflicts and that most of these may be resolved or avoided through schedule making. In a few instances where these cannot be avoided in schedule making it is sometimes necessary to re-counsel and re-register the student. Usually this takes place after the first scheduling pass but obvious conflicts may be dealt with immediately.

MASTER SCHEDULE DESCRIPTION

Step One.

The principal will prepare a master schedule making careful use of the information in the course tally and the conflict matrix.

The breakdown in numbers of pupils from each grade registered in each subject (as shown in the course tally, Figure 7) will give him an accurate, if not exact, count of his entire enrollment for each period of the day and a guarantee that he has provided enough class

FIGURE 7

SHOWING A TALLY OF COURSE OFFERINGS BY GRADE BY SEX

L:FLER PAGE 1

#	COURSE	TOTAL	7TH	8TH	9TH	MALE	FEMALE
002	NO OPTIONAL	704	263	201	240	385	319
112	OFFICE ASST	18	1		17	2	16
114	A V ASST	24			24	18	6
116	TEACHER ASST	44			44	18	26
203	ENGLISH 7	248	247	1		132	116
207	ENGLISH 7 H	58	58			20	38
211	ENGLISH 7 L	19	19			13	6
227	ENGLISH 8	229		229		125	104
231	ENGLISH 8 H	58		58		16	42
235	ENGLISH 8 L	26		26		17	9
251	ENGLISH 9	288	1		287	167	121
286	SPEECH 1	32		13	19	18	14
288	SPEECH 2	44		18	26	13	31
290	JOURNALISM	22			22	10	12
311	PREP BAND	54	54			38	16
313	BAND	33		28	5	24	9
314	ADV BAND	44		18	26	28	16
315	PREP ORCHESTRA	31	31			16	15
317	ADV ORCHESTRA	35		21	14	22	13
340	GIRLS CHORUS 7	75	75				75
360	BOYS CHORUS 7,8 & 9	137	47	44	46	136	1
372	GIRLS CHORUS 8 & 9	93	1	43	49		93
402	IND ARTS 7	85	85			85	
404	IND ARTS 8	84		84		83	1
408	WOODWORK 2	43			43	43	
418	DRAWING	38		15	23	38	
426	ELECTRONICS 2	20	1		19	20	
430	CRAFTS	26		10	16	25	1
440	HOME EC 7	79	79				79
442	HOME EC 8	79		79			79
444	HOME EC 9	29			29		29
502	ART 1 - 7,8, & 9	54	34	6	14	14	40
504	ART 2-7	114	114			73	41
509	ART 2-8 & 9	75		33	42	34	41
541	FRENCH 2	29		29		8	21
545	FRENCH 1 & 2	15			15	6	9
549	FRENCH 3 & 4	17			17	4	13
553	SPANISH	75			75	29	46
557	GERMAN	31	1	1	29	22	9
603	ARITH 7	273	272		1	144	129
607	ARITH 7 H	31	31			11	20
611	ARITH 7 L	21	21			11	10
619	ARITH 8	257		255	2	123	134
627	ARITH 8 L	27		27		21	6
631	ALGEBRA 8	31		31		16	15
639	GENERAL MATH	57			57	33	24
643	ALGEBRA 9	211			211	119	92
647	GEOMETRY	22	1		21	17	5
702	SCIENCE 7	161	161			81	80
716	SPACE SCI	23		10	13	20	3
718	SCIENCE 9	28			28	26	2
728	HEALTH ED	152		152		76	76

situations to house all of his pupils each period. Boy-girl distribution in each grade is easily determined by using the breakdown for any subject required of all pupils in that grade.

The conflict matrix is to be used for constant reference with regard to "singleton" sections and their potentiality in causing student schedule conflicts.

Step Two.

The principal will prepare a master schedule description sheet listing each section of each course, the period the class meets, the room number, the name of the teacher and the number of students to be assigned to each section. Instructions for filling out the course description sheet are found in Figure 9. A typical cross section of a completed schedule sheet is shown in Figure 10.

Although listing of courses on the master schedule description sheet in ascending numerical order is not required, most principals follow the procedure of noting the number of sections for each course on the margin of their tally sheet which is displayed in numerical order (see Figure 7) and using this as a final check, comparing the total number of entries on the course description sheet with the total of sections provided on the tally sheet with the total number of sections provided on the master schedule.

FIRST SCHEDULING PASS

The first scheduling pass is a trial run which gives an overall view of the versatility of the proposed master schedule. More than one scheduling pass is possible, if needed, before the final run but, generally, one trial run is sufficient. The result of the first

FIGURE 8

SHOWING A TYPICAL REGISTRATION DISPERSAL OF
COURSE TALLIES ON A CONFLICT GRID

	207	211	231	235	286	288	290	311	313	314	315	317	340	372	408	418	426	430	444	502	508	541	545
207	058							010			013		014							009			
211		019						005					002							003			
231			058		003	004			006	007		007		014					001		001	005	013
235				026		001			001	002				005		002			002		001	001	
286					032		001		002	004		001		001	001				001	001	001	003	002	001
288						044	004		001	002		001		007	003	004	001		004		002		
290							022					001		006	001	002	001		005		002		001
311								054					007	001						001			
313									033							001		001			001	004	
314										044				004	003		002	001		003	002		001
315											031		002							001			
317												035		002	001		002			001		002	001
340													075										
372														093					008	001	007	004	005
408															042	008	002	001		001	008		002
418																038	002	002			001		
426																	020	001			002		
430																			026	001	001	004	001
444																			029	001	003		002
502																					054		001
508																						075	004	002
541																							029	
545																								015

INTERPRETATION (LINE ONE)

COURSE 207, WHOSE ENROLLMENT IS (058), APPEARS TO HAVE POTENTIAL CONFLICTS WITH COURSES 311 (010), 315 (013), 340 (014) AND 502 (009).

COURSES 340 AND 502 MAY BE DISREGARDED SINCE THEY ARE SECOND SEMESTER COURSES (EVEN NUMBERED). BUT CAREFUL ATTENTION SHOULD BE PAID TO COURSES 311 AND 315 SO THAT THEY DO NOT APPEAR IN THE SAME PERIOD AS COURSE 207.

INASMUCH AS THERE ARE (058) ENROLLED IN COURSE 207, IT IS REASONABLE TO ASSUME THAT THERE WILL BE TWO SECTIONS. IN THIS SITUATION THE CHANCE FOR CONFLICT IS REDUCED TO A MINIMUM AND THE POTENTIAL CONFLICTS (IN THIS INSTANCE) MAY BE DISREGARDED.

FIGURE 9

SHOWING A LIST OF INSTRUCTIONS FOR COMPLETING
COURSE DESCRIPTION SHEET

COMPLETING THE COURSE DESCRIPTION FORM

Columns 1 to 4
The number of seats available for that particular classroom. Even though there are four positions for number of seats, the maximum allowed by the program is 999 seats in one section.

Column 5
The semester code for each semester. All sections within any course number must have the same semester code.

Columns 6 to 8
The three digit course offering codes from 001 to 999.

Columns 9 & 10
Section number within course offering code. The first section must be 01. Those following must be in sequence with no omissions or blanks.

Columns 11 to 24
Course title. All 14 positions may be used and will be printed on the student schedule forms. The course should be completely defined, however, in the first 10 positions.

Columns 25 to 27
The number of credit hours given for successful completion of the course for one semester. Columns 25 & 26 contain the integral portion of the value, and column 27 contains the decimal portion.

Column 28
The period designation in this column is for the convenience of the person making the master schedule. It will not be punched into the master cards. The number (or numbers) in this column, when compared with the "period-day code" field (or fields) completed, provides a convenient check on accuracy.

Column 29
Blank

Columns 30 to 32
Teacher designation as desired by the school.

Columns 33 to 35
Room number or description.

FIGURE 9 (continued)

Columns 36 to 80

Complete only the appropriate period field (or fields) as indicated in column 28. This field should contain a "1" under each day that the class meets that period and a "0" (zero) under each day it does not meet. The fields for periods during which the class does not meet should be left blank. These remaining fields will contain zeros, but these will be punched in the cards by the data processing department.

FIGURE 10

SHOWING A TYPICAL CROSS SECTION OF A COMPLETED
SCHEDULE DESCRIPTION SHEET

LINCOLN PUBLIC SCHOOLS — COURSE DESCRIPTIONS — SCHOOL _____ 19__ 19__

NUMBER OF SEATS	SEM CODE	COURSE CODE	SEC. NO.	COURSE TITLE	HOURS CREDIT	PERIOD	TEACHER	ROOM NUMBER	PERIOD — DAY CODE 1 (M T W R F)	2	3	4	5	6	7	8	9
0035	2	2440	01	SR COMP 2	0052		BTN	147		11111							
0035	2	2450	01	SR COMP 2	0052		DUY	267		11111							
0035	2	2450	02	SR COMP 2	0056		MCK	261						11111			
0035	2	2460	01	SR COMP 2	0053		MCK	261			11111						
0035	2	2490	01	ENG 8A	0054		CMS	263				11111					
0030	2	3020	01	ART APPREC	0023		LBT	21B			10101						
0030	2	3080	01	ELEM DESIGN	0023		LBT	21B			01010						
0080	2	3580	01	GIRLS GLEE	0025		GNZ	122					00011				
0050	2	8230	01	AMER STDIES	0051		MLR	143	11111								
0035	2	9020	01	BOYS PE	0022		HMN	GYM		01010							
0035	2	9520	01	GIRLS SWIM	0024		JUR	POL				01010					
0030	2	9680	01	DRIVER ED	0021		WLD	AUD	10100								

scheduling pass is an updated master schedule and a list of conflicts.

UPDATED MASTER SCHEDULE.

Useful information provided by the run will appear in the following form:

Class Loading Lists. The updated master schedule contains data for each section of each course and the number of conflicted students registered for that course. It lists the number of pupils assigned to each section by the computer, indicates the number of sections that are "closed," lists the variance in numbers of pupils assigned among sections in that same course. (For this information to be of value to the principal he must exercise extreme care in determining that the listing of data for each sections corresponds exactly to his master schedule.) A portion of an updated master schedule is displayed as Figure 11.

LIST OF CONFLICTS.

Included as a part of the first scheduling pass is a print-out of all conflicts. Figure 12 shows a listing of conflicts and a key to interpreting the listing of conflicts.

By carefully comparing the list of conflicts with information derived from the updated master schedule, knowledge may be gained as to the reason for the conflicts and how the conflicts may be resolved. Direct conflicts may be handled through counseling. "Rejects" due to closed sections may be handled later through File Maintenance.

FIGURE 11

SHOWING A PORTION OF AN UPDATED MASTER SCHEDULE

COURSE CODE	SEM	COURSE MASTER DESCRIPTION	NO. OF SECTIONS	OPEN SECTIONS	STUD REQUESTS	SCHED. STUDENTS	CONFLICT STUDENTS
214	2	7 ENGLISH 050	8	7	249	249	

COURSE CODE		SECTION MASTER DESCRIPTION	SEC	STS	AVL. SEATS		MTWTF	MTWTF	MTWTF	MTWTF	MTWTF
214		7 ENGLISH CRA2C4	1	35	1	1	11111				
214		7 ENGLISH CRA2C4	2	35	7	2	11111				
214		7 ENGLISH CRA2C4	3	35	7	3	11111				
214		7 ENGLISH CRA2C4	4	35	4	4	11111				
214	D	7 ENGLISH CRA2C4	5	35		5	11111				
214		7 ENGLISH RAM211	6	35	8	3	11111				
214		7 ENGLISH RAM211	7	35	4	4	11111				
214		7 ENGLISH RAM211	8	35		6	11111				
		COURSE TOTAL	280	31							1 SECTION CLOSED

COURSE CODE	SEM	COURSE MASTER DESCRIPTION	NO. OF SECTIONS	OPEN SECTIONS	STUD REQUESTS	SCHED. STUDENTS	CONFLICT STUDENTS
216	2	7 ENGLISH 050	1	1	31	31	

COURSE CODE		SECTION MASTER DESCRIPTION	SEC	STS	AVL. SEATS		MTWTF	MTWTF	MTWTF	MTWTF	MTWTF
216		7 ENGLISH RAM211	1	35	4	7	11111				
		COURSE TOTAL	35	4							

COURSE CODE	SEM	COURSE MASTER DESCRIPTION	NO. OF SECTIONS	OPEN SECTIONS	STUD REQUESTS	SCHED. STUDENTS	CONFLICT STUDENTS
228	2	8 ENGLISH 050	8	7	248	248	

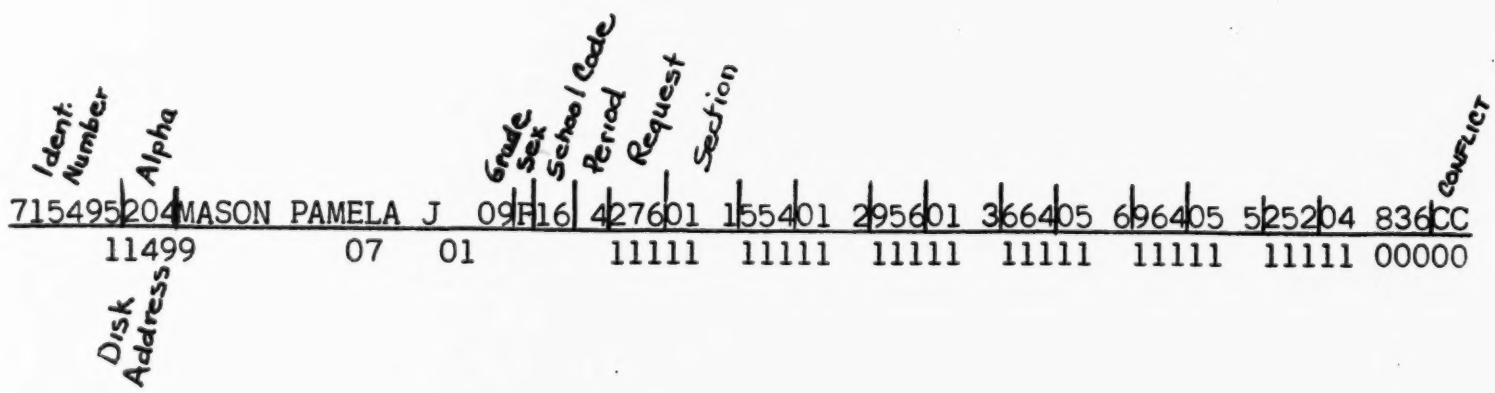
COURSE CODE		SECTION MASTER DESCRIPTION	SEC	STS	AVL. SEATS		MTWTF	MTWTF	MTWTF	MTWTF	MTWTF
228		8 ENGLISH BUR2C2	1	35	2	6	11111				
228		8 ENGLISH DEG2C5	2	35	2	2	11111				
228		8 ENGLISH DEG2C5	3	35	7	3	11111				
228		8 ENGLISH DEG2C5	4	35	5	4	11111				
228		8 ENGLISH DEG2C5	5	35	2	5	11111				
228		8 ENGLISH ROG116	6	35	8	3	11111				
228		8 ENGLISH ROG116	7	35	3	5	11111				
228		8 ENGLISH ROG116	8	35	3	6	11111				
		COURSE TOTAL	280	32							

FIGURE 12

SHOWING A LIST OF CONFLICTS FOR
JUNIOR HIGH SCHOOL STUDENTS

```
          IDENTIFICATION                                  R E Q U E S T S                                                    PAGE 1
     ADDR       REQ  REM  LUN                               P E R I O D S

715495204MASON PAMELA J   09F16 427601 155401 295601 364405 696405 525204  836CC
    11499        07   01       11111  11111  11111  11111  11111  11111  00000  00000 00000 00000 00000 00000

720898214BENNETT JEFFREY  08M16 331801  874CC 762001 192001 577805 696405 222802 482003
    11883        08   01       10101  11111  11111  11111  11111  11111  11111  00001 00000 00000 00000 00000

722937115FRIESEN ARLYNN G 08M16 331801  874CC 762001 192001 677804 496404 222802 582008
    12027        08   01       10101  11111  11111  11111  11111  11111  11111  00001 00000 00000 00000 00000

73112360 BRUNER JOHN F    07M16 133601 650201 721601  850CC 390202 570205 460402 280201
    12654        08   01       11111  11111  01010  11111  11111  11111  11111  00010 00000 00000 00000 00000

73235860 EMBREE DOUGLAS C 07M16 133601 650201 721601  850CC 390202 570205 260403 480209
    12765        08   01       11111  11111  01010  11111  11111  11111  11111  00010 00000 00000 00000 00000

73930060 WELLS JANET M    07F16 331801  856CC 444002 691003 560406 121401 280201
    13341        07   01       11111  11111  11111  11111  11111  01010  00000  00010 00000 00000 00000 00000
```

INTERPRETATION



INTERIM ADJUSTMENT PERIOD

Spring registration, early construction of a master schedule and program updating permits the principal to regard the summer recess as an interval in which adjustments on student programs and on the master schedule may be made.

STUDENT PROGRAM ADJUSTMENT.

Student requests which were not scheduled because of direct conflicts or invalid course codes, or were rejected because of seating limitations imposed by the principal may be resolved during this time.

Direct conflicts, obviously, necessitate counseling and the selection of different course offerings which fit into the master schedule.

Requests for student program changes should be made on Form EDP-6802. Since a new card will be punched for each student program change, Form EDP-6802 should record the complete program request of the student and not just the changes. Figure 13 shows the correct way to request pupil program changes.

If pupil program changes reach proportions where whole sections are involved, it is suggested that there is some advantage in completing new Course Request Forms for the students involved.

MASTER SCHEDULE ALTERATION.

At this point in the scheduling procedure, the principal has the distinct advantage of evaluating his schedule and making changes as might make it more workable. Improvement may be accomplished by opening new sections to level the class load or by closing out sections in which there is not sufficient registration,

The principal may also wish to change teacher assignment and/or

FIGURE 13

SHOWING STANDARD FORM EDP-6802 TO BE USED FOR
STUDENT COURSE REQUEST CHANGE

FORM EDP-6802

SCHOOL_____BUILDING NUMBER _____ GRADE _____ DATE _____

COURSE REQUEST CHANGES

NUMBER	STUDENT NAME	COURSE CODES REQUESTED
716777	Doe, John	427 155 956 364 696 525 344
717432	Roe, Richard	874 762 192 577 696 222 482
718081	Smith, Mary	331 874 762 192 677 496 582
718222	Snuff, Sarah	133 650 444 691 560 121 280

room assignments for certain subjects. Consideration of the flow of student traffic between classes, fire exit routines, lunchroom facility scheduling and noon hour supervision are usual considerations in contemplated changes. Any changes in the master schedule should be requested on a completed course description sheet (see Figure 10). New course description cards will be punched for these sections in which changes are involved.

FINAL SCHEDULING RUN

Prior to the final run the possibility still exists to enter additional student requests by punching additional machine-readable cards, to make adjustments on the master schedule which may have been invoked by changes in registration or changes in personnel and to resolve any conflicts which may have occured. Also, in instances where it can be determined that students have left the district, registration cards may be removed, making the student population current with the opening of school. The final scheduling run will result in:

STUDENT SCHEDULES.

One original and three copies of each student's schedule is provided to the school-- two office copies (one yellow, one white), one counselor's copy (blue), and one student copy (pink). An example of a completed student schedule is displayed as Figure 14.

UPDATED MASTER SCHEDULE.

The updated master schedule provided will again report for each section of the master schedule the number of requests for that subject, the number of student conflicts, the number of available seats remaining in each section and the number of sections closed. (See Figure 11).

FIGURE 14

SHOWING SAMPLE OF STUDENT SCHEDULE

FIRESTONE JIMMIE	M	10		682832	1966		SOUTHEAST
NAME	SEX	GRADE	ALPHA	STUDENT CODE	YEAR	ER	SCHOOL

CODE	COURSE	TEACHER	PERIOD	ROOM	* SEM. CODE	DAYS
201	ENGLISH 4	RSH	1	263		MTWTF
703	BIOLOGY 2	BGT	2	171		MTWTF
740	WORLD HISTORY	REI	3	149		MTWTF
609	GEOMETRY 2	BAK	4	225		MTWTF
752	10 GUIDANCE	WSN	5	115		T F
775	HEALTH ED	TRM	5	165		M T
999	STUDY HALL		5	AUD		W
441	WOODWORK 2	WSR	6	123		MTWTF

STUDENT'S SCHEDULE

*SEMESTER CODE:

1 — FIRST SEMESTER ONLY
2 — SECOND SEMESTER ONLY
3 — FIRST SEMESTER OF A TWO SEMESTER COURSE

TO THE STUDENT:

IT IS REQUIRED THAT YOU TAKE THIS COPY OF YOUR SCHEDULE WITH YOU WHEN YOU REPORT TO THE CLASSES LISTED HEREON.

OFFICE COPY

_____

_____

_____

FIRESTONE JIMMIE 10

LIST OF CONFLICTS.

Those students who could not be scheduled within the limits of the master schedule and the class limits set by the principal will appear as conflicts.

File Maintenance Run. At this juncture, the errors, rejects or conflicts may be resolved by the File Maintenance Run. This is a force routine which enables the administrator to update the computer records thereby completing conflict-free schedules for all students. Updating the computer records is accomplished by implementing a series of "take from" (F) and "transfer to" (T) orders given the machine by the computer operator. Decisions for the orders are made by the principal who, after using the list of printed conflicts (see Figure 12) and the updated master schedule (see Figure 11) for reference, may request the computer to remove a course request from a student record and transfer that student to a different course and section.

Requests for program changes which will resolve conflicts under the File Maintenance Run must be submitted on Form EDP-6805 which appears as Figure 15. Instructions for using Form EDP-6805 are printed under Figure 16.

STUDENT CLASS CARD.

The final scheduling run will also produce a card for each student for each subject for which the student is registered. It is this production card which makes possible the added service of

FIGURE 15

FORM EDP-6805 USED TO REQUEST PROGRAM CHANGES
DURING FILE MAINTENANCE RUN

FORM EDP-6805

PROGRAM CHANGE REQUESTS FOR FILE MAINTENANCE RUN

SCHOOL _____ PAGE ___ OF ___

Ident. No. _____ Name of Student _____

Disk Address		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.	
	From	F	CC	F		F		F		F	
	To	T		T		T		T		T	

Ident. No. _____ Name of Student _____

Disk Address		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.	
	From	F	CC	F		F		F		F	
	To	T		T		T		T		T	

Ident. No. _____ Name of Student _____

Disk Address		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.	
	From	F	CC	F		F		F		F	
	To	T		T		T		T		T	

Ident. No. _____ Name of Student _____

Disk Address		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.		Course Code & Sect.	
	From	F	CC	F		F		F		F	
	To	T		T		T		T		T	

FIGURE 16

SHOWING A SEQUENCE OF INSTRUCTIONS TO BE USED
IN REQUESTING PROGRAM CHANGES UNDER
THE FILE MAINTENANCE RUN

INSTRUCTIONS FOR USING FORM EDP-6805:

1. Enter the name of the school.
2. Enter the student identification number and the pupil's name in the spaces provided.
3. Enter the disk address. (Consult **Interpretation**, Figure 12 to locate this five digit number).
4. After the letter "F," enter the three digit course code of the subject to be changed, and the section of the course to be changed. (CC in case of conflict).
5. After the letter "T," enter the course code and section number which is to be punched for input to the file change program.

Note: If more than the five spaces provided are necessary to complete the program change request, continue on the next line.

the class roster and the possibility of grade reporting by computer.

PROCEDURE FOR SECOND SEMESTER

The procedures for second semester scheduling are the same as for the first semester. In most instances the procedure begins with the process of updating registration. This process can be accomplished near the end of the first month of school when the enrollment has stabilized, program changes have been effected and class sections have been balanced.

Project ADMIRE has attempted to place in the hands of the principal and his staff an effective, efficient system covering the registration and scheduling of secondary school students. It is inevitable that amibiguities will arise, that inconsistencies may occur, that modifications of form and process will be made and that supplementary information will have to be provided.

The success of this program depends in large measure on planning and completing a Spring registration. It is also imperative that students be informed that the selection of courses they make in the Spring is final with very few exceptions. Some of the more obvious exceptions are program changes due to failures to be made up, attendance at summer school and such changes in the Fall as determined on their respective merits by the principal. The ultimate success, however, lies in attention to detail, to careful planning and to consistent quality in forms completed and raw material provided for use by the Data Processing Center.

APPENDIX A

JUNIOR HIGH SCHOOL COURSE OFFERING
Lincoln Public Schools

(100) MISCELLANEOUS

First Sem	Second Sem	Both Sem	Course Titles
111	121		Assistant - - Library or Student Assistant Period 1
112	122		Assistant - - Library or Student Assistant Period 2
113	123		Assistant - - Library or Student Assistant Period 3
114	124		Assistant - - Library or Student Assistant Period 4
115	125		Assistant - - Library or Student Assistant Period 5
116	126		Assistant - - Library or Student Assistant Period 6
110	120		Assistant - - Library or Student Assistant Period 0

(200) ENGLISH

Optional	Period		
g7	001	002	003
g8	005	006	007
g9	009	010	011

201	202	203	7 English - - 7th grade English
205	206	207	7 English - - 7th grade English High Achievement Level
209	210	211	7 English - - 7th grade English Low Achievement Level
		212	7 Reading - - 7th grade Reading
213	214	215	7 English - - 7th grade Project English
217	218	219	7 English - - 7th grade Project English High Achievement Level
221	222	223	7 SpecEd Eng- 7th grade English Special Education
		224	7 Read-S - - 7th grade Reading Special Education
225	226	227	8 English - - 8th grade English
229	230	231	8 English - - 8th grade English High Achievement Level
233	234	235	8 English - - 8th grade English Low Achievement Level
		236	8 Reading - - 8th and/or 9th grade English
237	238	239	8 Reading - - 8th grade Project English
241	242	243	8 English - - 8th grade Project English High Achievement Level
245	246	247	8 SpecEd Eng- 8th grade English Special Education
		248	8 Read-S - - 8th grade Reading Special Education
249	250	251	9 English - - 9th grade English
253	254	255	9 English - - 9th grade English High Achievement Level
257	258	259	9 English - - 9th grade English Low Achievement Level
261	262	263	9 English - - 9th grade Project English
265	266	267	9 English - - 9th grade Project English High Achievement Level
269	270	271	9 SpecEd Eng- 9th grade English Special Education
		272	9 Read-S - - 9th grade Reading Special Education

(200) LITERATURE - SPEECH - JOURNALISM

Optional Period
013 014
015 016
017 018

273	274	Literature- - 8th grade Literature
275	276	Literature- - 7th and/or 8th and/or 9th grade Literature
277	278	Literature- - 9th grade Literature
279	280	Speech - - 7th grade Speech 1
281	282	Speech - - 8th grade Speech 1
283	284	Speech 1 - - 9th grade Speech 1
285	286	Speech 1 - - 7th and/or 8th and/or 9th grade Speech 1
287	288	Speech 2 - - 8th and/or 9th grade Speech 2
289	290	Journalism- - 8th and/or 9th grade Journalism
291	292	Journ Eng - - 9th grade Journalism & English-double period
293	294	Drama - - Beginning Drama
295	296	Drama 2 - - Drama 2
297	298	Speech Eng- - 9th grade Communicative Arts, Speech, English and Creative Writing

(300) INSTRUMENTAL MUSIC

Optional Period
083 084
085 086
087 088

301	302		Beg Inst - - Beginning Instruments
307	308		Inst Music- - Instrumental Music
309	310		Beg Band - - Beginning Band
		311	Prep Band - - Prep Band
		313	Band - - Band
		315	Prep Orch - - Prep Orchestra
		317	Orchestra - - Orchestra
321	322		Ensemble - - Advanced Ensembles
323	324		Mus App - - Music Appreciation

(300) VOCAL MUSIC

Optional Period
089 090
091 092
093 094

335	336	337	7b Chorus - - 7th grade Boys Chorus
339	340	341	7g Chorus - - 7th grade Girls Chorus
351	352	353	8b Chorus - - 8th grade Boys Chorus
355	356	357	8g Chorus - - 8th grade Girls Chorus
359	360	361	b Chorus - - 7th, 8th, 9th grade Boys Chorus
363	364	365	g Chorus - - 7th, 8th, 9th grade Girls Chorus

367	368	369	b Chorus - - 8th and 9th grade Boys Chorus
371	372	373	g Chorus - - 8th and 9th grade Girls Chorus
375	376	377	9b Chorus - - 9th grade Boys Chorus
379	380	381	9g Chorus - - 9th grade Girls Chorus
387	388	389	Ad Choral - - Advanced Chorus for Selected Pupils
391	392	393	Mus App - - Music Appreciation

(400) INDUSTRIAL ARTS

Optional Period
053 054
055 056
057 058

401	402	Ind Arts - - 7th grade Introduction to Industrial Arts
403	404	Woodwork - - 8th grade Beginning Woodwork
405	406	Woodwork - - 8th and/or 9th grade Beginning Woodwork
407	408	Woodwork - - 8th and/or 9th grade Advanced Woodwork
409	410	Metals 1 - - 8th grade Metal Work 1
411	412	Metals 1 - - 8th and/or 9th grade Metal Work 1
413	414	Metals 2 - - 8th and/or 9th grade Metal Work 2
415	416	Drafting 1- - 8th grade Drawing
417	418	Drafting 1- - 8th and/or 9th grade Beginning Drawing
419	420	Drafting 2- - 8th and/or 9th grade Advanced Drawing 2
421	422	Electronics - 8th grade Beginning Electricity & Electronics
423	424	Electronics - 8th and/or 9th grade Beginning Electricity and Electronics
425	426	Electronics - 8th and/or 9th grade Advanced Electricity and Electronics 2
427	428	Crafts 1 - - 8th grade Industrial Crafts 1
429	430	Crafts 1 - - 8th and/or 9th grade Industrial Crafts 1
431	432	Crafts 2 - - 8th and/or 9th grade Industrial Crafts 2
433	434	5M Engines- - Small Engines
475	476	SpEd IA - - 7th grade Industrial Arts Special Education
485	486	SpEd IA - - 8th grade Industrial Arts Special Education
495	496	SpEd IA - - 9th grade Industrial Arts Special Education

(400) HOME ECONOMICS

Optional Period
059 060
061 062

439	440	Home Ec - - 7th grade Home Economics
441	442	Home Ec - - 8th grade Home Economics
443	444	Home Ec - - 9th grade Home Economics
445	446	Home Ec b - - 9th grade Home Economics for Boys
447	448	SpEd HE - - 7th grade Home Economics Special Education
449	450	SpEd HE - - 8th grade Home Economics Special Education
451	452	SpEd HE - - 9th grade Home Economics Special Education

(500) ART
Optional Period
095 096

501	502	7 Art 1	- - 7th grade Beginning Art
503	504	7 Art 2	- - 7th grade Art 2
505	506	Art 1	- - 8th and/or 9th grade Art 1
507	508	Art 2	- - 8th and/or 9th grade Art 2
509	510	Art 3	- - 8th and/or 9th grade Art third semester
511	512	Art 4	- - 8th and/or 9th grade Art fourth semester
513	514	Art 5	- - 9th grade Art fifth semester
515	516	Art 6	- - 9th grade Art sixth semester
517	518	Art 1	- - 7th and 8th grade Beginning Art
519	520	Art 1	- - 7th, 8th, 9th grade Beginning Art
521	522	Art 2	- - 7th, 8th, 9th grade Art 2
523	524	SpEd Art	- - Art - Special Education

(500) FOREIGN LANGUAGE

531	532	533	French 1	- - 7th grade Beginning Conversational French
535	536	537	French 1	- - 7th grade Conversational French 1 for pupils with elementary school French
539	540	541	French 2	- - 8th grade Second Year Conversational French 2
543	544	545	French 1-2-	- 9th grade Beginning French
547	548	549	French 3-4-	- 9th grade Second Year French
551	552	553	Spanish	- - 9th grade Beginning Spanish
555	556	557	German	- - 9th grade Beginning German

(600) MATHEMATICS
Optional Period
g7 035 036 037
g8 039 040 041
g9 043 044 045

601	602	603	7 Math	- - 7th grade Arithmetic
605	606	607	7 Math	- - 7th grade Arithmetic High Achievement Level
609	610	611	Geometry	- - Geometry
613	614	615	SpEd Math	- - 7th grade Arithmetic Special Education
617	618	619	8 Math	- - 8th grade Arithmetic
621	622	623	8 Math	- - 8th grade Arithmetic High Achievement Level
625	626	627	8 Math	- - 8th grade Arithmetic Low Achievement Level
629	630	631	Beg Alg	- - 8th grade Algebra for Accelerated Pupils
633	634	635	8 SpEd Math	- 8th grade Arithmetic Special Education
637	638	639	9 Math	- - 9th grade General Mathematics
641	642	643	Beg Alg	- - 9th grade Beginning Algebra
645	646	647	Adv Alg	- - 9th grade Advanced Algebra
649	650	651	SpEd Math	- - 9th grade Arithmetic Special Education

(700) SCIENCE

Optional Period
g7 047 048
g8 049 050
g9 051 052

701	702		7 Life Sci- - 7th grade Life Science
703	704		7 Life Sci- - 7th grade Life Science High Achievement Level
705	706		7 SpEd Sci- - 7th grade Science Special Education
707	708		8 Earth Sci - 8th grade Earth Science
709	710		8 Earth Sci - 8th grade Earth Science High Achievement Level
711	712		8 Earth Sci - 8th grade Earth Science Low Achievement Level
713	714		8 SpEd Sci- - 8th grade Science Special Education
715	716		Space Sci - - 8th and/or 9th grade Air Space Science
717		719	9 PhySci 1- - 9th grade Physical Science 1
	718		9 PhySci 2- - 9th grade Physical Science 2
725	726	727	Int Phy Sci - Introductory Physical Science

(800) SOCIAL STUDIES

Optional Period
g7 023 024 025
g8 027 028 029
g9 031 032 033

801	802	803	Am Studies- - 7th grade American Studies
805	806	807	Am Studies- - 7th grade American Studies High Achievement Level
809	810	811	Am Studies- - 7th grade American Studies Low Achievement Level
813	814	815	Soc St Sp - - 7th grade Social Studies Special Education
817	818	819	Am Studies- - 8th grade American Studies
821	822	823	Am Studies- - 8th grade American Studies High Achievement Level
825	826	827	Am Studies- - 8th grade American Studies Low Achievement Level
829	830	831	Soc St Sp - - 8th grade Social Studies Special Education
833	834	835	W Studies - - 9th grade World Studies
837	838	839	W Studies - - 9th grade World Studies High Achievement Level
841	842	843	W Studies - - 9th grade World Studies Low Achievement Level

(800) ORIENTATION and EDUCATIONAL PLANNING

Optional Period
075 076 077
078 080 081

851	852	853	7 Orient A- - 7th grade Orientation A (M-W-F first week)

(800) ORIENTATION and EDUCATIONAL PLANNING
Optional Period
075 076 077
079 080 081

851	852	853	7 Orient A- - 7th grade Orientation A (M-W-F first week)
855	856	857	7 Orient B- - 7th grade Orientation B (T-R first week)
859	860	861	8 Ed Plan - - 8th grade Educational Planning A (M-W-F first week)
863	864	865	8 Ed Plan - - 8th grade Educational Planning B (T-R first week)
867	868	869	Orient Sp - - Special Education Orientation

(800) ENGLISH and AMERICAN STUDIES
Optional Period
019 020 021

881	882	883	Eng Am St - - Two period block 7th grade English and American Studies
885	886	887	Eng Am St - - Two period block 7th grade English and American Studies High Achievement Level
889	890	891	Eng Am St - - Two period block 7th grade English and American Studies Low Achievement Level

(900) PHYSICAL EDUCATION
Optional Period
063 064 065
067 068 069
071 072 073

90	902	903	7 Ph EdbA - - 7th grade Physical Education Boys A (T-R first week)
905	906	907	7 Ph EdbB - - 7th grade Physical Education Boys B (M-W-F first week)
909	910	911	7 Ph EdgA - - 7th grade Physical Education Girls A (T-R first week)
913	914	915	7 Ph EdgB - - 7th grade Physical Education Girls B (M-W-F first week)
917	918	919	8 Ph EdbA - - 8th grade Physical Education Boys A (T-R first week)
921	922	923	8 Ph EdbB - - 8th grade Physical Education Boys B (M-W-F first week)
925	926	927	8 Ph EdgA - - 8th grade Physical Education Girls A (T-R first week)
929	930	931	8 Ph EdgB - - 8th grade Physical Education Girls B (M-W-F first week)
933	935		Health - - Health Education 8th and 9th grade
935	936	937	9 Ph Ed b - - 9th grade Physical Education Boys A
939	940	941	9 Ph Ed b - - 9th grade Physical Education Boys B
943	944	945	9 Ph Ed b - - 9th grade Physical Education Boys

947	948	949	9 Ph Ed g - - 9th grade Physical Education Girls A
951	952	953	9 Ph Ed g - - 9th grade Physical Education Girls B
955	956	957	9 Ph Ed g - - 9th grade Physical Education Girls

(900) TYPING
Optional Period 099

961		Typing 1	- - 8th grade Typing 1
	962	Typing 2	- - 8th grade Typing 2
963		Typing 1	- - 9th grade Typing 1
	964	Typing 2	- - 9th grade Typing 2
965	966	SpEd Typ	- - Typing - Special Education

APPENDIX B

SENIOR HIGH SCHOOL COURSE OFFERINGS
Lincoln Public Schools

(001-099) SPECIAL PURPOSE

First Sem	Second Sem	Both Sem	Course Titles
010	020		Assistant - - Asst. Period Unassigned
011	021		Assistant - - Asst. Office
012	022		Assistant - - Asst. Library
013	023		Assistant - - Asst. Lang. Lab.
014	024		Assistant - - Asst. Nurse
015	025		Assistant - - Asst. Audio-Visual
016	026		Assistant - - Asst. Counselor
017	027		Assistant - - Asst. Teacher
		070	Employment- - Spec. Employment
		080	Athletics - - Baseball
		081	Athletics - - Basketball
		082	Athletics - - Cross Country
		083	Athletics - - Football
		084	Athletics - - Gymnastics
		085	Athletics - - Golf
		086	Athletics - - Swimming
		087	Athletics - - Tennis
		088	Athletics - - Track
		089	Athletics - - Wrestling

(100) BUSINESS EDUCATION

101	102		Bus Prin - - General Business 1, 2
107	108		Cler Rekpg- - Clerical Record Keeping 1, 2 Vocational
111	112		Typing - - Typing 1, 2 Vocational
113	114		Typing - - Typing 1, 2 Non-vocational
115	116		Typing - - Typing 3, 4 Vocational
		131	Shorthand - - Shorthand 1, 2 Vocational
		133	Shorthand - - Shorthand 3, 4 Vocational
		135	Steno Tr - - Stenographic Training 1, 2 Vocational
		137	Cler Tr - - Clerical Training 1, 2 Vocational
161	162		Bus Prin - - Advanced Business Practices 1, 2
163	164		Bus Prin - - Advanced Business Management 1, 2

(200) ENGLISH

201	202	203	English - - English 3, 4
213	214	215	Eng Proj - - English 3, 4 Project
		221	Jr Comp - - Junior Composition
		231	Eng Proj - - 11 English Project

237 Eng Proj - - 12 English Project
241 Sr Comp - - Senior Composition 1, 2
253 Creat Wri - - Creative Writing
261 Am Lit - - American Literature 1, 2
263 Eng Lit - - English Literature 1, 2
267 Gen Lit - - General Literature 1
271 Speech - - Speech 1
273 Drama - - Drama 1
275 Debate - - Debate 1, 2
277 278 Journalism- - Journalism 1
295 Read Imp - - Reading Improvement
297 Sr Comp - - Senior Composition

(300) FINE ARTS

301 Art Apprec- - Art Appreciation
303 Des-Crafts- - Design & Crafts 1, 2
307 Ele Design- - Elementary Design 1, 2
309 Draw-Paint- - Drawing & Painting 1, 2
311 Draw-Paint- - Drawing & Painting 3, 4
313 Comm Art - - Commercial Art
335 Prep Band - - Prep. Band 1, 2
337 Adv Band - - Adv. Band 1, 2
341 Adv Orch - - Adv. Orchestra 1, 2
353 Chorus - - Chorus
355 Boys Glee - - 10 Boys Glee 1, 2
357 Girls Glee- - 10 Girls Glee 1, 2
359 Boys Glee - - 11 Boys Glee 1, 2
361 Girls Glee- - 11 Girls Glee 1, 2
369 Choir - - Choir 1, 2
371 Girls Oct - - Girls Octet 1, 2
373 Boys Oct - - Boys Octet 1, 2
375 G Voice - - Girls Voice 1, 2
377 B Voice - - Boys Voice 1, 2
379 Madrigal - - Madrigal 1, 2
381 Mus Appr - - Music Appreciation
383 Mus Theory- - Music Theory 1, 2

(400) HOME ECONOMICS, INDUSTRIAL ARTS, TRADES

401 Cloth-Text- - Clothing & Textiles 1, 2
403 Cloth-Text- - Clothing & Textiles 3, 4
405 Food-Nutr - - Foods & Nutrition 1, 2
407 Food-Nutr - - Foods & Nutrition 3, 4
409 Home Plan - - Home Planning & Decorating
411 Homemaking- - Homemaking 1, 2
415 Agriculture - Voc. Agriculture
423 Mech Draft- - Mechanical Drafting 1, 2
425 Arch Draft- - Architectural Drafting 1, 2
427 Tech Draft- - Trades Technical Drafting 1, 2
431 Electronic- - Electronics 1

433	Sm Engines	- -	Small Engines 1, 2
435	Electronic	- -	Electronics 2, 3
437	Computer	- -	Computer 1, 2
441	Woodwork	- -	Woodwork 1
443	Woodwork	- -	Woodwork 2, 3
445	Woodwork	- -	Woodwork 4, 5
451	Printing	- -	Printing 1
453	Printing	- -	Printing 2, 3
455	Printing	- -	Printing 4, 5
461	Machine	- -	Machine 1
463	Machine	- -	Machine 2, 3
465	Machine	- -	Machine 4, 5
471	Eng Mech	- -	Engine Mechanics 1
475	Auto Mech	- -	Auto Mechanics 2, 3
477	Auto Mech	- -	Auto Mechanics
481	Auto Orien	- -	10th Grade Block, Machine, Electronics, Engine Mechanics, Auto Mechanics
483	Gr Art Ori	- -	10th Grade Block, Woodwork, Printing, Industrial Crafts, Engine Mechanics
491	Ind Crafts	- -	Industrial Crafts
493	Homemaking	- -	Homemaking 1x, 2x
495	Food Nutr	- -	Foods & Nutrition 1x, 2x
497	Woodwork	- -	Woodwork 1x, 2x
499	Cloth-Text	- -	Clothing & Textiles 1x, 2x

(500) FOREIGN LANGUAGE

501	French	- -	French 1, 2
505	French	- -	French 3, 4
509	French	- -	French 5, 6
511	French	- -	French 7, 8
521	German	- -	German 1, 2
525	German	- -	German 3, 4
527	German	- -	German 5, 6
529	German	- -	German 7, 8
541	Latin	- -	Latin 1, 2
543	Latin	- -	Latin 3, 4
545	Latin	- -	Latin 5, 6
561	Spanish	- -	Spanish 1, 2
565	Spanish	- -	Spanish 3, 4
569	Spanish	- -	Spanish 5, 6
571	Spanish	- -	Spanish 7, 8

(600) MATHEMATICS

603	Math	- -	Secondary Mathematics 1, 2
605	Algebra	- -	Algebra 1, 2 N
607	Algebra	- -	Algebra 1, 2 A
609	Geometry	- -	Geometry 1, 2 N
611	Geometry	- -	Geometry 1, 2 A

613	Algebra	- -	Algebra 3, 4 N
615	Algebra	- -	Algebra 3, 4 A
617	Algebra	- -	Algebra 5
619	Trig	- -	Trigonometry N
621	Trig	- -	Trigonometry A
623	Analy Geom-	- -	Analytical Geometry N
625	Analy Geom-	- -	Analytical Geometry A
627	Math Analy-	- -	Mathematical Analysis
691	Math	- -	Mathematics 1x, 2x

(700) SCIENCE

701	Science	- -	Science 1, 2
703	Biology	- -	Biology 1, 2 N
705	Biology	- -	Biology 1, 2 A
707	Physiology-	- -	Physiology 1, 2
721	Physics	- -	Physics 1, 2 N
723	Physics	- -	Physics 1, 2 A
731	Chemistry	- -	Chemistry 1, 2
737	Chemistry	- -	Chemistry 3, 4
791	Biology	- -	Biology 1x, 2x

(800) SOCIAL STUDIES

801	Wrld Studies-		World Studies 1, 2 N
802	Wrld Studies-		World Studies 2 N
803	Wrld Studies-		World Studies 1, 2 A
806	Wrld Studies-		World Studies 2 R
821	Am History-	-	American History 1, 2 A-N
822	Am History-	-	American History 2 A-N
825	Am History-	-	American History 1, 2 R
826	Am History-	-	American History 2 R
829	Modrn Prob-	-	Modern Problems N
831	Modrn Prob-	-	Modern Problems A
833	Modrn Prob-	-	Modern Problems R
841	Intnat Rel-	-	International Relations
843	Economics	- -	Economics
849	Psychology-	-	Psychology
859	Religion	- -	Religion
845	Sociology	- -	Sociology
847	Civics	- -	Civics
893	Am History-	-	American History 1x, 2x
895	Wrld Geog	- -	World Geography 1x, 2x
897	Modrn Prob-	-	Modern Problems x
899	Soc Living-	-	Social Living 1x, 2x

(900) PHYSICAL EDUCATION, HEALTH, DRIVER EDUCATION, MISCELLANEOUS

901	Phys Ed	- -	Boys Phys. Ed.
902	Phys Ed	- -	Boys Phys. Ed.

		921	Swimming - - Beginning Swimming-Boys
		922	Swimming - - Advanced Swimming-Boys
		941	Phys Ed - - Girls Phys. Ed.
		942	Phys Ed - - Girls Phys. Ed.
961	962		Health Ed - - Health Education
967	968		Driver Ed - - Driver Education
		975	Stagecraft- - Stagecraft 1, 2
		991	Studnt Cou- - Student Council 1, 2

(860-889) GUIDANCE

		861	Guidance - - 10th Guidance
		863	Guidance - - 10th Guidance
		865	Guidance - - 10th Guidance
		867	Guidance - - 10th Guidance
		869	Guidance - - 10th Guidance x
		871	Guidance - - 11th Guidance
		873	Guidance - - 11th Guidance
		875	Guidance - - 11th Guidance
		877	Guidance - - 11th Guidance
		879	Guidance - - 11th Guidance x
		881	Guidance - - 12th Guidance
		883	Guidance - - 12th Guidance
		885	Guidance - - 12th Guidance
		887	Guidance - - 12th Guidance
		889	Guidance - - 12th Guidance x

END

2-12-69